AMENDMENTS

Please amend the claims as set forth in the following claim listing.

1-80 (cancelled)

81. (New) A method for identifying a Hh-dependent modulator of motor neuron differentiation, comprising the steps of: (a) providing a first collection of embryonic stem cells and a second collection of embryonic stem cells; (b) contacting both collections of cells with an effective amount of retinoic acid to induce differentiation of the cells to form spinal progenitor cells; (c) contacting both collections of cells with an effective amount of a factor that directly effects signaling within a Hh signalling pathway; (d) contacting the first collection of cells with a candidate modulator; and (e) determining if the candidate modulator in step (d) modulates motor neuron differentiation by comparing the motor neuron phenotypes of the cells in the first and second collections of cells produced by steps (b)-(d) where , if the motor neuron phenotypes of the cells in the first and second collections are different, it indicates that the candidate modulator is a modulator of Hh-dependent motor neuron differentiation.

82. (New) The method of claim 81, where the motor neuron phenotype comprises expression of the motor neuron associated protein HB9.

83. (New) The method of claim 81, where the motor neuron phenotype comprises expression of Green Fluorescent Protein, where expression of Green Fluorescent Protein is controlled by the HB9 promoter.

84. (New) The method of claim 81, where the modulator has an agonistic effect on motor neuron differentiation whereby the rate of motor neuron differentiation in the first collection of cells, contacted with the modulator, is increased relative to the rate of motor neuron

differentiation in the second collection of cells, as measured by the presence of one or more feature characteristic of a motor neuron phenotype.

85. (New) A method for identifying a Hh-dependent modulator of motor neuron differentiation, comprising the steps of: (a) contacting a collection of embryonic stem cells with an effective amount of retinoic acid to induce differentiation of the cells to form spinal progenitor cells; (b) contacting the collection of cells with an effective amount of a factor that directly effects signaling within a Hh signalling pathway; (c) contacting the collection of cells with a candidate modulator; and (d) determining if the candidate modulator increases the rate of motor neuron differentiation as measured by the presence of one or more feature characteristic of a motor neuron phenotype, wherein an increase in the rate of motor neuron differentiation indicates that the candidate modulator is an agonist of motor neuron differentiation.

86. (New) The method of claim 85, where the phenotype comprises expression of the motor neuron associated protein HB9.

87. (New) The method of claim 85, where the phenotype comprises expression of Green Fluorescent Protein, where expression of Green Fluorescent Protein is controlled by the HB9 promoter.